



DRAFT TANZANIA STANDARD

Fresh rhubarb – Specification

DRAFT FOR PUBLIC COMMENTS ONLY

TANZANIA BUREAU OF STANDARD

0. Foreword

Rhubarb (*Rheum rhabarbarum* L.) is a cool season, hardy, perennial vegetable, grown for leafstalks that have a unique tangy taste used for pies and sauces. They are good source of vitamins (A, B, C, and K), fiber and minerals (calcium, potassium, and iron).

This Tanzania Standard was prepared in order to provide guidance to producers and traders of fresh rhubarb as well as regulators and to act as a means for ensuring the safety and quality of the produces.

In the preparation of this Tanzania Standard considerable assistance was derived from:

UNECE STANDARD FFV-40:2017, *Marketing and commercial quality control of rhubarb*.

In reporting the results of a test or analysis made in accordance with this standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4 (see clause 2).

1. Scope

This standard specifies the requirements, methods of sampling and test of leaf stalks of rhubarb of varieties (cultivars) grown from *Rheum rhabarbarum* L. to be supplied fresh to the consumer, rhubarb for industrial processing being excluded.

2. Normative references

The following referenced standards are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced standards (including any amendments) applies.

- a) TZS 4, *Rounding off numerical values*
- b) TZS 109, *General principles of food hygiene - Code of practice*
- c) TZS 122, *Foodstuffs- Microbial examination for Salmonella spp*
- d) TZS 552, *Code of Hygienic Practice for Fresh Fruits and Vegetables*
- e) TZS 538, *Pre -packaged food labeling - general requirements*
- f) TZS 729, *Microbiology of food and animal feeding stuffs -Horizontal method for the enumeration of coliforms - Colony count technique*

- g) TZS 730-2, *Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of -b-glucuronidase-positive Escheria coli - Part 2 - Colony-count technique at 44 0C using 5-bromo-4-chloro-3-indolyl-b-D-glucuronide*
- h) TZS 852-1, *Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of Listeria monocytogenes - Part 1 - Detection method*
- i) TZS 1002, *Fresh fruits and vegetables - Sampling.*
- j) TZS 1003, *Guide to the prepacking of fruits and vegetables*
- k) Codex stan 193 *General Standard for Contaminants and Toxins in Food and Feed*
- l) *Codex pesticide residues in food online data base*

3. Terms and definitions

For the purposes of this standard, the following terms and definitions apply;

3.1 fresh

not limp or wilted

3.2 straight

the stalk has not more than a slight concave curvature of the face, and not more than slight twisting along the longitudinal axis of the stalk

3.3 well trimmed

the top has been neatly knife-trimmed so that not more than 50.8 mm of the midribs and thin leaf tissue remains, and that most of the basal husk has been removed

3.4 damage

any defect or any combination of defects which materially detracts from the appearance, or the edible or shipping quality of the stalk

3.5 diameter

the greatest distance across the flat face of the stalk at the center of its length

3.6 length

the overall length after the stalk has been well trimmed

3.7 sound

produce not affected by rotting or deterioration such as to make it unfit for consumption

3.8 intact

no part(s) removed and have not suffered any damage

3.9 clean

practically free of any visible foreign matter

4 Requirements

4.1 General requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, the rhubarb shall be:

- intact;
- sound;
- clean;
- fresh in appearance;
- practically free from pests and damage caused by them;
- turgid;
- smooth and not excessively fibrous;
- practically unbruised;
- of a colour characteristic of the mode of cultivation;
- free of abnormal external moisture;
- free of any foreign smell and/or taste

The development and condition of the rhubarb shall be such as to enable them:

- withstand transport and handling, and
- arrive in satisfactory condition at the place of destination

4.2 Specific requirements

4.2.1 Classification

Rhubarbs are classified in two classes defined below:

4.2.1.1 Class I

Rhubarb in this class shall be of good quality. They shall be characteristic of the variety in relation to the mode of cultivation.

The leaf-stalks shall be well developed and free of patches of rust.

Rhubarb from forcing houses shall be straight, free of bud sheathes, deep pink or red in colour for at least two-thirds of the stalk length. Leaf blades, when present, should be undamaged.

The following slight defect, however, may be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a slight defect in shape.

4.2.1.2 Class II

This class includes rhubarb which do not qualify for inclusion in Class I but satisfy the general requirements.

The following defects may be allowed provided the rhubarb retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape
- races of rust, removable by normal peeling by the consumer
- slight external bruises
- slight surface cracks.

4.2.2 Size requirements

Size is determined by the length and by the diameter of the leaf-stalks measured at the mid-point of their length.

Minimum sizes (cm)						
	Rhubarb from forcing houses		Rhubarb forced in the open		Rhubarb grown in the open (without forcing)	
	Length	Diameter	Length	Diameter	Length	Diameter
Class I	25	1.5	20	2.0	25	2.0
Class II	20	1.0	15	1.5	20	1.5

A minimum length is not required for rhubarb presented uniformly in packages.

5 Tolerances

Tolerances in respect of quality and size shall be allowed in each package or each unpackaged bundle for produce not satisfying the requirements of the class indicated.

5.1 Quality tolerances

5.1.1 Class I

A total tolerance of 10 per cent, by number or weight, of rhubarb not satisfying the requirements of the class but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce satisfying neither the requirements of Class II quality nor the general requirements, or of produce affected by decay.

5.1.2 Class II

A total tolerance of 10 per cent, by number or weight, of rhubarb satisfying neither the requirements of the class nor the general requirements, is allowed. Within this

tolerance not more than 2 per cent in total may consist of produce affected by decay.

5.2 Size tolerance

For all classes: 10 per cent by number or weight of rhubarb not satisfying the requirements as regards sizing is allowed.

6 Presentation

6.1 The contents of each package, or each bundle in the same package shall be uniform and contain only rhubarb of the same origin, variety, mode of cultivation and quality.

The visible part of the contents of the package or bundle shall be representative of the entire contents.

7 Contaminants

7.1 Heavy metal contaminants

Fresh rhubarb shall comply with those maximum metal contaminants established by the Codex Stan 193.

7.2 Pesticide residues

Fresh rhubarb shall comply with those maximum residue limits established in the Codex pesticide residues in food online data base.

8 Hygiene

8.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with TZS 109 and TZS 552 (see clause 2).

8.2 Fresh rhubarb shall be free from worms or their eggs.

8.3 Fresh rhubarb shall also comply with the microbial requirements prescribed in Table 1.

Table 1 Microbiological requirements for fresh rhubarb

Characteristic	Requirement	Test method
Coliforms, cfu/g	10 ²	TZS 729
<i>Escherichia coli</i> , cfu/g	Absent	TZS 730-2
<i>Salmonella</i> spp /25 g	Absent	TZS 122
<i>Listeria monocytogenes</i> /25g	Absent	TZS 852-1

9. Sampling and Tests

9.1 Sampling

Representative samples of the fresh rhubarb shall be drawn as prescribed in TZS 1002 (see clause 2).

9.2 Tests

Tests shall be done in accordance with the methods prescribed in this standard.

10 Packaging, marking and labelling

10.1 Packaging

10.1.1. The rhubarb shall be packed in such a way as to protect the produce properly.

The materials used inside the package shall be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials particularly paper or stamps bearing trade specifications is allowed provided the printing or labelling has been done with non-toxic ink or glue.

Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects.

Packages (or bundles if delivered in bulk) shall be free of all foreign matter.

10.1.2 The bulk/shipping containers shall meet the quality, hygiene, ventilation and resistance characteristics that shall ensure suitable handling, shipping and preserving fresh rhubarb. Packages shall be free of foreign matter and objectionable smell.

10.1.3 The use of any substance tending to modify the natural characteristics of the produce, especially form, texture and taste shall be prohibited.

10.1.4 In addition to the provisions covered by this standard, fresh rhubarb shall also be packed in accordance with TZS 538 and TZS 1003 (See clause 2).

10.2 Marking and labelling

10.2.1 Each package shall legibly and indelibly bear the following information:

- a) Name, physical and postal address of the packer and/ or dispatcher;
- b) Name of the produce "rhubarb";
- c) Country of origin;
- d) Class;
- e) Net weight or number of bundles followed by the unit weight;
- f) Brand or trade mark, if any;
- g) Storage condition;
- h) Pack date;
- i) Indication "forced", where appropriate.

10.2.2 Certification mark – Each container may also be marked with TBS certification mark.

NOTE: The use of TBS certification mark is governed by provisions of the Standards Act, 2009. Details of the conditions under which a license for the use of TBS certification mark may be granted to manufacturers or producers, may be obtained from TBS.